CHEVRON
APPALACHIAN/MICHIGAN
STRATEGIC BUSINESS UNIT

Preparedness, Prevention & Contingency (PPC) Plan

Prepared in Conformance with 25 PA Chapters 78 and 91
and
PA Oil and Gas Operator's Manual, Chapter 4, Section 1A:
Guidelines for a PPC Plan for Oil and Gas Development

for Pennsylvania Gas Drilling Operations

Revised: NOVEMBER 2011

SEPTEMBER 2011

WELL SITE SPECIFIC ADDENDUM

- Section A -

to

Preparedness, Prevention & Contingency (PPC) Plan

SITE NAME _____

COUNTY _____

TOWNSHIP _____

ACCESS ROAD GPS COORDINATES	
EMERGENCY CONTACT NUMBERS Additional Emergency Contacts listed on Table 9	
EXTERNAL	INTERNAL
	Primary: **Bob Hirtz** – General Manager Cell – **724-323-5632** Office – **724-564-3726** Secondary: **Scott Kohne** – Land Manager Cell – **724-977-1380** Office – **724-564-3737** Tertiary **Tim Berdar** – Construction Supervisor Cell – **724-323-5651** Office – **724-564-3725**
DIRECTIONS:	

WELL SITE SPECIFIC ADDENDUM

- Section B -

to

Preparedness, Prevention & Contingency (PPC) Plan

SITE NAME _____

SUPPLEMENTAL WASTE AND CHEMICAL INVENTORY ITEMS: (*list below any chemicals or waste not listed in Attachments 1 or 2)*				
Chemical Name/Waste Type	**Date**	**Storage Location**	**Average Quantity**	**Container Type**

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Attachments

1.0 Introduction and Purpose

The purpose of this Preparedness, Prevention & Contingency (PPC) Plan is to ensure adequate preparedness for rapid and appropriate incident response in order to protect Chevron employees, the environment, and Chevron assets. For the purposes of this PPC Plan, an incident is defined as an event that interrupts normal Chevron activities and may result in a threat to human health and/or the environment if not properly addressed.

This PPC Plan is designed to be applicable to any type of incident that may affect Chevron well locations. The PPC Plan is based on the concept that elements of incident response are similar, regardless of the hazard. However, the Plan contains certain hazard-specific information in cases where the hazard requires a response that is unique and not covered by other elements of the PPC Plan. All Chevron employees are to abide by the provisions of this Plan and are required to participate in its administration.

This PPC Plan was developed to comply with the requirements of applicable State laws pertaining to Chevron operations at well locations, specifically PA Title 25 Chapters 78 and 91. Required contents for a Waste Control and Disposal Plan are included in this PPC Plan.

1.1. This PPC Plan may be subject to revision and/or update whenever any of the following occur and will be reviewed annually.

- Applicable DEP regulations are revised
- The plan fails in an emergency
- The installation changes in its design, construction, operation, or other circumstances, in a manner that materially increases the potential for fires, explosions or releases of toxic or hazardous constituents; or which changes the response necessary in an emergency;
- The list of emergency coordinators changes;
- The list of emergency equipment changes; or
- As otherwise required by the department.

1.2. This plan will be located at each well location until the site is reclaimed and in production. A Site Specific Addendum will be attached to each PPC Plan which will identify the name of the well and local emergency contact numbers.

1.3. Copies of the PPC Plan including the Site Specific Addendum for each well location are maintained by the HES Manager at the District office. An electronic copy of the generic portion of the PPC Plan is available to all Chevron employees.

2.0 Background and Responsibility

2.1. Background

2.1.1. Chevron is an oil and gas well company with site locations throughout Western Pennsylvania with a field office located at:

Fayette District (Fayette County):
800 Mountain View Drive
Smithfield, PA 15478
724-564-3700

And a business unit office at:

Moon Township - Appalachia/Michigan Business Unit (AMBU)
1550 Coraopolis Heights Rd.
Moon Township, PA 15108
412-262-2830

2.2. Description of Well Pad Activities

Gas wells drilled and owned by Chevron are non-transportation related for the purposes of onshore gas production. The main activities performed on a well pad are deep gas well drilling using air rotary and rotary steerable methods, well completion via hydraulic fracturing ("fracing"), and natural gas production and transmission.

2.3. Roles and Responsibilities - In the event of an incident at a Chevron site, each employee has specific roles and responsibilities. It is the responsibility of individual employees to know their roles prior to an incident occurring.

2.3.1. Chevron employees are responsible for the following:

- Reporting emergency situations to the Emergency Response Coordinator as soon as possible and following their instructions.
- Attending required training on the contents of this PPC Plan.
- Ensuring that s/he understands emergency evacuation procedures.

2.3.2. Supervisors/Managers/Superintendents are responsible for the following:

- Ensuring their employees follow the procedures outlined in this Plan.
- Notifying the Emergency Response Coordinator of any incidents as soon as possible.
- Ensuring fast, safe and organized evacuation.
- Ensuring orderly and efficient business recovery once the threat has been mediated.

2.3.3. Emergency Response Coordinator (ERC)

The ERC is the primary person responsible for ensuring that an emergency situation is mitigated in a timely and safe manner.

The ERC must be thoroughly familiar with all aspects of this PPC Plan, all operations and activities at the well sites, the location and characteristics of hazardous materials and waste streams and the location of all records. In addition, the ERC has the authority to commit all resources needed to carry out this PPC Plan. In the event of an emergency, **the ERC must:**

- Implement the PPC Plan.
- Coordinate the shutdown of necessary equipment/systems for the site.
- Notify all personnel.
- Notify appropriate outside agencies or contractors with designated response roles if their help is needed.
- Ensure the incident is investigated and any necessary corrective actions to prevent future incidents are implemented.

Whenever there is a hazardous materials release, fire, or explosion, the ERC, while working with the General Manager and the HES Manager, is responsible for identifying the character, exact source, amount, and territorial extent of any released materials. Concurrently, the ERC must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment will consider both direct and indirect effects of the chemical release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions). However, this assessment should be done in a manner that protects the safety of all personnel, including the ERC and emergency responders.

Fayette Emergency Response Coordinators

Primary:
Bob Hirtz – General Manager
Cell – 724-323-5632
Office – 724-564-3726

Secondary:
Scott Kohne – Land Manager
Cell – 724-977-1380
Office – 724-564-3737

Tertiary:
Tim Berdar – Construction Supervisor

Cell – 724-323-5651
Office – 724-564-3725

2.3.4. General Manager (GM) and Operations Manger

The General Manager of the Fayette office and the Operations Manager of the Moon Township office should be notified of any emergency situation as soon as possible. The GM is the primary response coordinator. The GM is responsible for dedicating the resources to investigate the cause of any incidents and to implement necessary corrective actions. The GM is responsible for ensuring necessary corrective actions are completed in a timely manner.

Bob Hirtz – General Manager
Cell – 724-323-5632
Office – 724-564-3726

Greg Hild – Operations Manager
Cell – 713-591-4624
Office – 412-856-3481

2.3.5. Health, Environment and Safety Field Manager (HES Field Manager)

The HES Field Manager is responsible for providing technical and regulatory support to the ERCs and General Manager during an incident, and will provide resources necessary for mitigating and investigating the emergency situation.

Alan Haggerty - HES Field Manager
Cell - 412-518-0666
Office - 724-564-3711

3.0 Incident Preparedness

3.1. Training and drills - Field employees and supporting office employees receive training on the pollution control measures described in this PPC Plan. The training will address the following:

- Incident Organization
- Roles and Responsibilities
- Notification Procedures
- Evacuation Procedures
- Incidental Chemical Spill Response

In addition to PPC Plan training, employees who handle hazardous chemicals will be provided training on OSHA's Hazard Communication Standard (HAZCOM). The objective of the HAZCOM training is to familiarize employees with the hazards associated with the chemicals they use in the workplace. Employees with up-to-date HAZCOM training may respond to incidental spills of chemicals in their work area. All other chemical spills require offsite assistance from a HAZMAT team trained in the OSHA 1910.120 HAZWOPER standards. Training records will be kept in employee personnel records.

3.2. Response Equipment

- Spill Equipment – Spill cleanup materials including sorbents, shovels, and containers, are located at the Fayette District Office, the Wicks compressor station, and at some well pads. Spill cleanup materials are also stored in vehicles operated by field employees who are trained in small spill cleanup procedures.
- Fire extinguishers are located at well locations where drilling and completion activities are underway, and in field trucks owned by Chevron.
- First aid kits - First aid kits are located at the compressor station and on each well tender's vehicle.
- MSDS's – Material safety data sheet books are located in the Fayette district office building. Contractors that bring their own hazardous materials on site will provide their own MSDSs and keep them on site while they are working.

4.0 Incident Notification

Any employee who encounters an emergency situation at a well site, compressor station or drilling site should immediately evacuate the area and call the ERC and, if necessary, call 911 or the 911 Call Center specific to the county where the incident has occurred. See the table in Section 9 that lists emergency response entities.

The ERC will determine who will need to be involved with the response and make the proper notifications that can include any of the entities listed in Section 9 depending on the situation.

5.0 General Response Procedures

At the onset of an emergency, the employee first to respond will initiate the evacuation and isolation of the affected area. Once the ERC arrives, they will make an initial assessment of the situation and determine the extent of the incident. The ERC will ensure that all personnel are accounted for (refer to evacuation procedures), call for additional resources, and notify management.

Upon the arrival of outside emergency services (e.g., Police, Fire Department, etc.), the lead agency's on-scene commander has the authority to take over command of emergency response operations.

In the event of an incident, follow these steps:

- Stay calm. Do not panic.
- Evacuate if necessary and notify the ERC immediately thereafter.
- Explain the nature of the incident.
- The ERC will determine if offsite resources are required to respond.

Following an incident, follow these steps:

- The HES Field Manager and GM will ensure all wastes associated with the incident are properly disposed.
- The GM and ERC will ensure replacement of any onsite response equipment used during the incident.
- The GM, HES Field Manager and ERC will coordinate the investigation and development of corrective actions.
- The GM, HES Field Manager and ERC will ensure corrective actions are completed on schedule.

6.0 Site Evacuation Procedures

Employees that encounter an incident while working at or near well locations should immediately leave the area and call the ERC and if necessary emergency services. The Chevron representative, ERC or delegate will ensure all employees and contractors are removed from the area (take a head count), remain together and mustered to a safe location. Remain in this area until emergency services or the ERC arrives.

6.1. Key points for site personnel to follow:

- DO stop all work.
- DO leave area.
- DO follow instructions.
- DO know who your ERC is.
- DO NOT lag behind.
- DO NOT stop for personal belongings.
- DO NOT return to the site until advised to do so.
- DO NOT go home unless authorized to do so.
- DO NOT attempt to move vehicle(s) unless instructed to do so.
- DO NOT block emergency vehicle thoroughfares.

6.2. Area Relocation

Chemical spills, fumes, or smoke may necessitate moving people to a safer area. If a hazardous materials release occurs, employees should move to an area which is effectively "uphill and upwind" of the spill or fumes. The ERC should be notified immediately in case the surrounding community could be affected. The ERC will advise the employees when it is safe to re-enter the area.

7.0 Fire and Explosions

This section outlines the provisions for responding to a fire or explosion at a well site. In general, the responsibilities of Chevron personnel in fire emergencies are to: (1) ensure evacuation, (2) notify the Fire Department, and (3) provide support services to the Fire Department as requested.

If a fire or explosion occurs at a well location, the employee should notify the ERC and, if necessary, call 911 or the 911 Call Center specific to the county where the incident has occurred.

The employee or their supervisor will inform the ERC of the following information:

- Exact location of the fire;
- Type of fire (e.g., flammable liquid, electrical, etc.);
- If any injuries have occurred or if anyone is trapped; and
- Whether or not the fire is near critical systems (e.g., chemical storage areas, tanks, well heads).

8.0 Hazardous Material (HAZMAT) Spills and Releases

The purpose of this section is to minimize the safety, health, and environmental hazards due to spills and releases of hazardous materials. Materials considered hazardous are those which meet the definition set forth in Article 80 of the Uniform Fire Code (latest edition), materials listed in 40 CFR Part 302.4 (CERCLA Hazardous Substances, Appendix 6), 49 CFR Part 172.101 (DOT HAZMAT Table) and materials which are Hazardous wastes as defined in 40 CFR §261.3. Hazardous materials include raw chemical materials, hazardous wastes, and biological wastes.

8.1. Incidental versus Emergency HAZMAT Spills

8.1.1. Hazardous material spills may be classified as either "incidental" or "emergency" incidents. The purpose of distinguishing between the two types of incidents is to allocate properly trained response resources accordingly.

8.1.2. **Incidental events** present minimal health and safety hazards to employees in the immediate work area or those assigned to respond to the event and may be characterized by the following criteria:

- limited in scope
- limited in exposure potential
- limited in toxicity

Other circumstances to consider when determining if a hazardous material spill is incidental are:

- Properties of the spilled chemical (volatility, flammability, corrosivity etc.)
- Employee knowledge of the spilled chemical
- Proximity of spill cleanup equipment
- Availability of appropriate personal protective equipment (PPE)
- Adequate ventilation
- Confined space considerations
  - NOTE: If a hazardous material spill is "incidental," annual HAZCOM training adequately prepares an associate to respond to the incident.

8.1.3. In contrast, OSHA 1910.120(a)(3) defines an "**emergency response**" as the following:

- A response effort by employees from outside the immediate release area or by other designated responders (i.e. mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by the employees in the immediate release area, or by maintenance personnel, are not considered to be emergency responses within the scope of this standard.
- An emergency response may include, but is not limited to, the following situations:
  - The response comes from outside the immediate release area.
  - The release requires evacuation of employees in the area.
  - The release poses, or has the potential to pose, conditions that are immediately dangerous to life and health (IDLH).
  - The release poses a serious threat of fire or explosion (exceeds or has the potential to exceed the lower explosive limit).
  - The release may cause high levels of exposure to toxic substances.
  - There is uncertainty that the employee in the work area can handle the severity of the hazard with the PPE and equipment that has been provided and the exposure limit could easily be exceeded.
  - The spilled chemical is unknown or of unknown origin.
  - The release is threatening waterways

  NOTE: If an employee is uncomfortable or in doubt of the severity of a HazMat spill, they are to assume it is a potential emergency and call the ERC. Only employees with OSHA 24-Hour HazMat training may respond to an emergency HazMat spill.

8.2. Hazardous Material Spills and Releases

8.2.1. For the purposes of this Plan, a **spill** is defined as the accidental discharge of a solid, liquid, or gas from its proper container whether from container failure, upset, or unintentional drainage or venting. Spills are confined to inside a building and are not in contact with the external environment.

A **release** is defined as a spill that enters the environment via soil, water or air.

8.2.2. Immediately upon observing a spill or release, the employee will contact the Environmental Compliance Department for assistance in determining the size and character of the spill. Additional spill cleanup guidance will be provided by appropriately trained members of the Regulatory Compliance Department.

- All environmental **releases** must be communicated to the ERC for appropriate internal and external notifications.
- Reporting procedures for spills or releases that are **emergency response incidents** are described in the preceding sections.

8.2.3. Hazardous material spills of less than five gallons will be defined as "incidental" spills and may be cleaned up by employees with up-to-date HAZCOM training if appropriate cleaning materials are readily available. Hazardous material spills ***greater than five gallons*** will be determined by the ERC as to who cleans up the spill: Chevron personnel or HAZWOPER trained individuals.

8.3. Spill/Release Potential

While it is Chevron's policy to take whatever reasonable measures are available to prevent or minimize the impact of hazardous materials incidents, the possibility still exists that a hazardous materials release may occur.

The **worst probable** spill scenario would involve a release of natural gas at a well site, drilling site or compressor station that is not under normal operating procedures and that can cause harm to individuals and the environment.

8.4. Spill/Release Prevention and Preparedness Measures

Specific measures have to be implemented at the Chevron districts to prevent hazardous material spills whenever possible. These prevention measures include:

- Annual spill potential assessments.
- Annual HAZCOM and hazardous waste training for appropriate employees.
- Annual training on this Plan.
- Annual fire drills/chemical spill exercises.
- All hazardous material containers are kept closed when not in use.

In addition to the activities listed above, specific preparedness measures are implemented at the Chevron district office and sites to minimize the impacts of hazardous material spills on the environment and employees. These preparedness measures include:

- MSDS's accessible to all employees.
- Containment systems for production tanks are located at each well site to prevent possible incidental leaks and spills from entering the environment. These systems are designed to hold 110% of the largest container's capacity.
- Containment systems are used at the drilling and completion sites to prevent process materials and equipment leaks from entering the environment.

8.5. Small Spill Procedures

Releases of small quantities (less than 5 gallons) which pose minimal safety and health dangers, do not adversely affect the environment, and are unlikely to grow in severity, may be handled by Chevron personnel trained to do so or an outside contractor. These personnel should:

- Consult the MSDS located in the work area for chemical-specific hazards;
- Ensure they are wearing proper personal protective equipment;
- Eliminate the source of the spill;
- Prevent the chemical from spreading; and
- Absorb the material using spill wipes.

Several methods and techniques are provided for the purpose of cleaning up spills. Depending on the category of the substance and its location, the following may be used either singularly or in combination. Spill cleanup materials are located at the Fayette District Office and the Wicks compressor station. Additional spill cleanup materials such as sorbents, shovels, and containers are stored in vehicles operated by field employees who are trained in small spill cleanup procedures.

8.5.1. Sorbent Materials - After donning appropriate personal protective equipment sorbent material may be used to absorb residual substances or to aid in controlling a spill from spreading into surrounding areas.

8.5.2. Spill Pillows/Booms - Chemical spill pillows and spill booms contain a highly absorbent and inert material in a porous bag allowing the flow of fluids into absorbent material. The fluids are retained by the absorbent, making it possible to contain the liquid. Place the pillows around the spill area, and working from the outside inward, absorb/collect the liquid. Once the chemical is absorbed by the pillows, they may be disposed of by placing them in the appropriate labeled hazardous waste container.

NOTE: Materials used to contain and absorb hazardous materials will acquire the hazardous characteristics of those materials and should be handled and disposed of accordingly.

8.6. Large Release Procedures

In the event of any release greater than 5 gallons of a hazardous material (see inventory of waste and products in Attachments 1 and 3), the observer should immediately notify the ERC, and provide the following information:

- Location of spill;
- Number of personnel affected/injures;
- Material spilled;
- Amount spilled; and
- Amount that has entered into storm drains, outside waterways, etc., if applicable.

The ERC will determine whether or not to dispatch the appropriate response resources and will notify the HES Field Manager will in turn determine if DEP notification is required.

8.7. Spill Response/Clean Up Contractors

ECS&R
3237 US Highway 19
Conchranton PA 16314
Jim Cessna or Stephanie Eliason-McKinney
814-425-7773

Weavertown Environmental Group
2 Dorrington Rd
Carnegie, PA 15106
Bob Kidd
800-746-4850

McCutcheon Enterprises, Inc.
250 Park Rd
Apollo, PA 15613
Mack Flood
cell 412-999-8700
724-568-3623

8.8. Disposal of Clean-Up Wastes

All waste must be properly characterized in accordance with DEP requirements. The container containing the waste must be kept closed and marked in some way to identify the generating location and contents. PA regulations require characterization of certain waste streams from well locations. The HES Manager must be contacted to provide proper instruction for the disposal of generated spill cleanup waste.

Two types of wastes may be generated via the containment of spilled hazardous substances:

8.8.1. Liquid Wastes

Liquids should be collected and transferred into a properly marked and labeled safety container and disposed of correctly (hazardous or non-hazardous waste). NEVER mix chemicals. This may cause a fire or explosion! Certain solvents will dissolve plastic drums. **Under no circumstances should liquid wastes be dispensed into sinks or drains.**

8.8.2. Solid Waste

If a solid waste is generated by using neutralization, sorbent, or chemical spill pillows/booms, the waste material must be collected and placed into the appropriate labeled (hazardous or non-hazardous waste) drum. Drums should be transferred to an appropriate location for temporary storage (for as short a period of time as possible) until an outside waste hauler can pick-up the drum(s).

8.9. Water Pollution Control

Should any chemical or oil spill get into storm drains or waterways, contact the ERC immediately with the name of the material spilled and the amount that entered the storm drains or waterways. If safe to do so, a responsible individual should stand by the incident to monitor the situation. The employee should attempt to contain the release and divert any additional spilled material from entering the storm drains if safe to do so, or call 911 or the 911 Call Center specific to the county where the incident has occurred. The ERC will then coordinate operations with an outside clean-up contractor.

9.0 Coordination with Outside Agencies

The extent of involvement, if any, by government agencies and/or private organizations in emergencies will depend upon the type and magnitude of the incident. Outside agencies that may become involved in the event of an emergency are as follows:

COUNTY	911 CALL CENTER: Call in the event of a FIRE, SPILL, or MEDICAL EMERGENCY	HOSPITAL	HEALTH DEPARTMENT
Bedford	814-623-1105	UPMC Bedford Memorial 814-623-6161	814-623-2001
Blair	814-940-5910	Nason Hospital 814-224-2141	814-946-7300
Butler	724-282-1221	Butler Memorial Hospital 724-283-6666	724-287-1769
Cambria	814-472-2072	Conemaugh Valley Memorial Hospital 814-534-9000	814-248-3120
Centre	800-479-0050	Mt. Nittany Medical Center 814-231-7000	814-865-0932
Clarion	814-226-7020	Clarion Hospital 814- 226-9500	814-226-2170
Clearfield	814-765-1533	Dubois Regional Medical Center 814-371-2200	814-765-0542
Crawford	814-724-2548	Meadville Medical Center 814-332-6860	814-332-6947
Fayette	724-430-9114	Uniontown Hospital 724-430-5000	724-439-7400
Greene	724-852-2911	Southwest Regional Medical Center 724-627-2602	724-627-3168
Indiana	724-394-1428	Indiana Regional Medical Center 724-357-7000	724-357-2995
Jefferson	814-849-1617	Punxsutawney Area Hospital 814-938-1800	814-938-6630
McKean	814-887-4911	Bradford Regional Medical Center 814-368-4143	814-368-0426
Mercer	724-662-6110	Sharon Regional Health System 800-346-7997	724-662-6068
Somerset	814-445-4133	Somerset Hospital 814-443-5000	814-445-7981
Washington	724-229-4600	Weirton Medical Center 304-797-6000 Washington Hospital 724-225-7000	724-223-4540
Westmoreland	724-836-1551	Excela Health Frick Hospital 724-547-1500	724-832-5315

When incident involves release of chemicals 5 gallons or more, the HES Manager should be notified immediately.	
PA Department of Environmental Protection	**Southwest Region** 412-442-4000 **Northwest Region** 814-332-6945 After hours: 800-373-3398 **Southcentral Region** 877-333-1904 **Northcentral Region** 570-327-3636 **Statewide** (if above contact cannot be made) 800.541.2050
Only when 3 or more employees hospitalized overnight or employee death.	
OSHA	**Erie** 814-461-1492 **Pittsburgh** 412-395-4903 **Harrisburg** 717-782-3902 **After hours** 800-321-6742
When release exceeds reportable quantities (RQ) and in the event of a discharge to Waters of the Commonwealth	
US EPA National Response Center	800-424-8802
For medical emergencies involving chemicals	
Poison Control Center	800-222-1222
For spill cleanup	
ECS & R	814-425-7773
Weavertown Environmental Group	724-746-4850
McCutcheon Enterprises Inc.	724-568-3623

10.0 Investigation and Corrective Action

Following all emergency response actions and activation of this plan, the ERC and managers of the responsible department(s) will hold a debriefing session for all key individuals involved. The ERC will complete a report to document the event. The response will be reviewed and response plans revised, if necessary.

An informal root cause investigation is performed for all incidents. Corrective actions will be implemented where procedures were inadequate or need improvement. Responsible persons will be listed and held accountable for follow-up. Any required retraining will also be documented and account for employees working in similar areas as where the incident occurred.

The Manager responsible for that particular operation will be responsible for insuring all corrective actions are implemented in a timely manner.

11.0 Wastewater Transporters and Waste Disposal Facilities

Water withdrawal sources and waste disposal information must be submitted to the DEP for Marcellus wells. These resources may be used for the drilling and fracing processes.

Drilling cuttings are either disposed of off-site at an approved landfill listed below, or solidified with Portland cement on location, encapsulated within the pit liner, and buried in place in accordance with DEP requirements.

11.1 Waste Frac Water and Drilling Water Transporters

Burkholtz Welding
195 Second Street Box 68
Heilwood, PA 15745

Harmony Gas, Oil & Timber Co.
1448 Patchen Highway
Cherry Tree, PA 15724

Heckman
297 Boy Scout Camp Road
Morgantown, WV 26508

Keister Trucking
511 Clover Run Road
Mahaffey, PA 15757

Force, Inc.
1077 Route 119 Hwy N
Indiana, PA 15701

Keystone Vac
234 Kline Road
Somerset, PA 15501

Appalachian Waste Services
195 Enterprise Lane
Connellsville, PA 15425

11.2 Liquid Waste Disposal Facility Information

Triad-Hunter Disposal
38505 Marietta Rd
Dexter City, OH 45727

11.3 Sludge and Liquid Disposal facility information (for spills, flowback residue, and other waste sludges):

CCS Corporation
Westmoreland Waste Sanitary Landfill
111 Conner Lane
Belle Vernon, PA 15301

11.4 Solid Waste Disposal Facility Information

Veolia Landfill
Chestnut Valley
1184 McClellandton Rd
McClellandton, PA 15458

Waste Management
Laurel Highland Landfill
260 Laurel Ridge Road
Johnstown, PA 15909

Waste Management
Arden Sanitary Landfill
Arden Station Rd
Washington, PA 15301

Waste Management
South Hills Landfill
3100 Hill Road
South Park, PA 15129

Republic/Allied Services
Whitefeather Landfill
2401 East Whitefeather Road
Pinconning, MI 48650

Waste Management
Shade Landfill
1176 No. 1Road
Cairnbrook, PA 15924

Waste Management
Lakeview LF
851 Robison Rd E,
Erie, PA 16509

Waste Management
S Alleghenies Landfill
843 Miller Picking Road
Davidsville, PA 15928

Waste Management
Evergreen Landfill
Rt 119 North Luciousboro Road
Coral, PA 15731

Waste Management
Meadowfill Landfill
Rt. 2
Bridgeport, WV 26330

Waste Management
Alliance Sanitary Landfill
398 S. Keyser Ave.
Taylor, PA 18517

Waste Management
Phoenix Resources Landfill
782 Antrim Road
Wellsboro, PA 16901

12.0 Waste Control and Disposal Methods

Wastes stored in containers are regularly inspected by field operations personnel to ensure overfill does not occur. Overflow prevention methods are implemented for tanks and containers used during drill and fracing operations. Any dispensing of waste from pits to containers is performed under the direct supervision of a Chevron employee or an approved contractor. All containers are above-ground. Waste stored in pits is regularly inspected to ensure the required free-board height is maintained.

Chevron-generated wastes are characterized to determine proper residual waste codes and ensure proper disposal arrangements are made. See Attachment 2 for a description of disposal methods for all wastes generated at well locations.

13.0 History of Pollution Incidents

Chevron maintains a record of all incidents of hydrocarbon and non-hydrocarbon spills that have occurred as a result of gas drilling and production activities. Incident history indicates that a majority of the spills are less than ten gallons. Spills greater than ten gallons that occurred are:

- 2 hydraulic fluid spills (approximately 15 gallons each),
- 2 drill mud spills (approximately one bbl and four bbls each),
- 1diesel fuel spill (approximately 20 gallons),
- 1 brine spill (15-20 gallons), and
- 1 condensate spill (approximately 20 gallons).

A majority of the spill incidents have been attributed to mechanical failure rather than human error.

All incidents were cleaned up in accordance with state and local requirements. Major incidents that occur at a well location, due to employee or contractor actions, are followed up with a formal root cause analysis. Preventive actions, responsibilities, and adequacy of resources are some of the many aspects investigated during the root cause analysis.

14.0 Pollution Prevention Measures

Chevron has implemented many different pollution prevention measures to help reduce or eliminate any possibility of materials entering the environment via air, water and land. These measures include the following:

14.1. Pressure Barrier Policy

Chevron's standard operating procedure requires a double barrier system at all well heads and wherever gas flow exists. Valves and/or blow out prevention systems are implemented as needed per application.

14.2. Fluid control measures

- Condensate transfers are manned at all times.
- Flowback monitoring is performed during the entire process
- Constant monitoring is performed during the fracing process
- Fluid level control systems are installed for all stock tanks
- Dikes with permanent lining systems are installed for all new well site tanks systems

14.3. Vapory recovery systems are being implemented in natural gas condensate areas

- Production tanks containing brine and/or condensate are epoxy lined, and the lower 12 inches are under-coated with coal-tar epoxy to provide corrosion protection.
- Inspection procedures are being conducted on a regular basis to assure all dike drains are plugged and tightened, all tank valves are locked and plugged and that all dikes are in good condition.
- New flowback procedures have been developed that prevent the chances of natural gas condensate to be dispensed into the holding pits, therefore, reducing the chances of contaminating the environment.
- Inspections are performed more frequently on high hazard sites including during drilling, fracing and flowback processes.

15.0 Well Site Specific Information

When a well site has been selected, the WELL SITE SPECIFIC ADDENDUM included in this PPC Plan will be modified to include site specific information. The document will be placed over the front page of this plan and maintained on location as required. The following information will be listed:

- Site Name,
- County,
- Access Road GPS Coordinates,
- Local Emergency Contact Numbers,
- Directions,
- Supplemental Waste and Chemical Inventory Items not already listed in Attachments 1 or 2

16.0 Housekeeping Program

The following housekeeping items have been implemented at all sites:

- Neat and orderly storage of chemicals including spill containment, labeling, closed containers and upright storage.
- Prompt removal of small spillage.
- Regular refuse pickup and disposal
- Temporary restroom facilities
- Regular site inspections for slip and fall issues.

17.0 Security

The following procedures have been implemented:

- Lighting is used when work is required to be completed during non-daylight hours.
- Fencing is used to protect pit areas.
- Locks on stock tank drains valves are installed.
- If on certain sites or areas where there are safety and security concerns, Chevron provides on-location security personnel to monitor these areas until all work is complete.

18.0 External Factors Planning

External factors are those most likely to be characterized as acts of nature, or those as a result of human carelessness or vandalism. External factors that could potentially result in a discharge include:

- Severe weather conditions such as extreme wind and/or cold, torrential rainfall, or blizzards that could contribute to equipment malfunction and/or failure caused by freezing, fatigue, or stress; power failure; fire; hazardous location and roadway conditions; decreased visibility; pit containment failure; and inability to marshal a timely and effective and response.

  Protective measures for severe weather include close monitoring of weather conditions, implementation of expanded policies and procedures for inspection, testing and operation of mechanical, hydraulic and pneumatic equipment during extreme environmental conditions, availability of emergency back-up power, enhanced location and road maintenance measures, nighttime over-the-road travel restrictions, enhance pit inspection, maintenance and enhanced erosion control measures, and implementation of decreased exposure times and increased implementation of personal protective equipment.

- Vandalism, strikes, and acts of terrorism that could contribute to malfunction, destruction and or loss of equipment, along with impedance to entering and/or the closure of facilities.

  Protective measures include enhanced monitoring of social, political and environmental conditions, implementation of heightened security measures in times of elevated risk, implementation of mitigating policies and procedures designed to protect personnel, operations and equipment, investigation and identification of alternative equipment, resources, facilities, and manpower.

19.0 Inspections

Inspections are performed at well locations on a regular basis for erosion and sediment (E&S) controls, safety issues, security issues and environmental issues. Deficiencies are immediately reported to the location's Person-in-Charge, and also reported to the department supervisor. Depending on the significance, the deficiency will be tracked in a database to ensure corrective actions are properly performed.

20.0 Preventative Maintenance

Regularly scheduled preventive maintenance on equipment, pumps, piping systems and valves, and engines is of utmost importance, as they help minimize the occurrence of leaks and releases of chemicals and other materials to containment systems and/or the environment.

Repairs to equipment and structures will be made on an as-needed basis, based on manufacturer's recommendations and the routine inspection recommendations. Repair work will be initiated and completed in a timely manner in order to reduce the potential for spills or leaks.

21.0 Training

Initial training on Chevron's PPC Plan is provided to Chevron employees that have responsibilities delineated in this PPC Plan. Employees are also trained to be able to respond effectively to emergencies by familiarizing them with emergency procedures including incident notification and response and emergency equipment including, where appropriate: procedures for using, inspecting, repairing and replacing emergency and monitoring equipment, communication and alarm systems, and response to fires and spills.

Contractors are responsible for training their employees for pollution response actions. Chevron employs a stringent contractor approval process to ensure appropriate training is provided to contract employees performing work at a Chevron location.

ATTACHMENT 1

WELL SITE CHEMICAL INVENTORY

HAZARDOUS MATERIAL	LOCATION	AVERAGE QUANTITY	CONTAINER TYPE
Natural Gas	Possibly all sites	Continuous flow	well head, separator, pipe line
Methanol	Fayette District Field office Employee vehicles	10 – 55 gallon drums One 55 gallon drum or smaller jerrycan	metal drums, jerry can
Crude Oil	Some well sites	8000 gallon	separator, tank
DRILLING CHEMICALS			
Acetylene	Drilling Site	1- 100 lb.	cylinder
Diesel Fuel	Drilling Site	9000 gallons	tank
Hydraulic fluid	Drilling Site	125 gallon	tank or metal drum
Oxygen	Drilling Site	1 – 100 lb.	cylinder
Propane	Drilling site	3 – 100 lb.	cylinder
Baroid	Drilling sites	19,000 lbs.	bag
Permaseal	Drilling Sites	2250 lbs.	plastic tote
Premium cement	Drilling sites	52,000 lbs.	bags or premixed in tanker truck
ABS40	Drilling sites	5000 gallons	tank
Barite	Drilling sites	354,000 lbs.	bag
ABS-40 mud/slurry	Drilling sites	188,131 lbs	tank
Lime	Drilling sites	4500 lbs.	bag
FRACING CHEMICALS			
Explosives	Frac sites	500 shots	secured box
Hydrochloric acid 7.5%	Frac sites	78,172 lb	tanker truck
Silica sand	Frac sites	1,104,375 lbs	sand hog/tank
Unislik SAT-50	Frac sites	83,903 lbs	plastic tote
EC6116A	Frac sites	1700 gallons	plastic tote
Scalehib 100	Frac sites	1700 gallons	plastic tote
CMHPG	Frac sites	2000 lbs.	bag
Iron Control A (EC6673W)	Frac sites	22,739 lbs	tote

ATTACHMENT 2

WASTE DISPOSAL METHODS

See section 11 for specific addresses

Residual Waste Stream	TREATMENT	DISPOSAL	REUSE at Chevron location
DRILLING WASTE:			
DRILLING WATER	Appalachian Waste Services	-	**YES**
DRILL CUTTINGS	On-site Stabilization	Veolia or Waste Management [or in limited instances: on-site burial in compliance with DEP Regulations]	NO
RIG WASH	Verify absence of hydrocarbons	-	**YES**
CELLAR WATER	Verify absence of hydrocarbons	-	**YES**
DRILL FLUID/MUD	On-site separation	-	**YES**
FRAC/COMPLETIONS WASTE:			
FLOWBACK	On-site treatment by ComTech	-	**YES**
PIT LINERS	Residue removed as needed	Veolia or Waste Management	NO
PIT LINER RESIDUE	Liquids are separated on site and treated on site by Comtech	Solids: Landfilled at Veolia or Waste Management or Republic/Allied Services	Liquids: **YES** Solids: NO
WORK TANK SLUDGE	On-site treatment	-	**YES**
PRODUCTION AND OTHER WASTE:			
TANK DIKE PRECIPITATION	-	* Disposal only for unacceptable quality precipitation from condensate-bearing tank storage areas or from waste with oil-sheen: Hunter Disposal	**YES ***
PRODUCTION BRINE	-	-	**YES**
SPILLS	-	Veolia or Waste Management	NO

ATTACHMENT 3

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REVISION UPDATES

REVISION	REASON FOR CHANGE	CHANGE MADE BY	DATE
1	New issue for Chevron Appalachia, LLC	C. Nichols	9/26/2011
2	Revisions to include newly acquired operations in Pennsylvania	C. Nichols J. Buckley, Tetra Tech	11/4/2011